

Appl. No. 09/531,135
Amdt. Dated February 19, 2004
Reply to Office Action of November 24, 2003

Attorney Docket No. 81784.0027
Customer No.: 26021

REMARKS/ARGUMENTS

Claims 1-10 are pending in the Application. By this Amendment, a new title is being provided as required in the Office Action. No new matter is involved.

At the top of page 2 of the Office Action, the title is said not to be descriptive and a new title clearly indicative of the invention to which the claims are directed is required. In response, Applicant is replacing the title "SOLID-STATE IMAGE PICKUP APPARATUS" with a new title which reads - -SOLID-STATE IMAGE PICKUP APPARATUS FOR GENERATING AN IMAGE SIGNAL BY ADDING OUTPUTS CORRESPONDING TO TWO TYPES OF LIGHT RECEIVING PIXELS HAVING DIFFERENT STORAGE TIME OF INFORMATION CHARGES--. Such new title is submitted to be clearly indicative of the invention to which the claims are directed.

On pages 2 and 3 of the Office Action, claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,638,118 of Takahashi, et al. This rejection is respectfully traversed.

Takahashi, et al. increases the dynamic range of a solid-state image pickup device by switching the storage time of information charges for each even or odd field, as described at lines 1-27 of column 5. When white blanking or blackening is generated, parts generating white blanking or blackening are replaced with the corresponding parts in the other field, as described at lines 21-52 of column 6.

The present invention is similar to Takahashi to the extent that the image information is obtained from two types of light receiving pixels having different storage time of information charges. However, the present invention differs significantly from Takahashi with respect to the structure for adding the image information from the two types of light receiving pixels, regardless of whether white blanking or blackening is generated or not. The structure of Takahashi requires

judging means for selecting either an even field or an odd field. In contrast, the present invention is advantageous in requiring only amending and adding the voltage levels and in not requiring any judging means in the manner of Takahashi.

Claims 1 and 7 are submitted to clearly distinguish patentably over Takahashi, in their present form. Claim 1 defines a solid-state image pickup apparatus in which a first light receiving pixel is disposed in a plurality of lines in one-line units and a second light receiving pixel capable of being driven independently from the first light receiving pixel is disposed in at least one-line units between first light receiving pixels of the plurality of lines. The apparatus includes a drive circuit for driving the first and second light receiving pixels and accumulating information charges at mutually different times between the first and second light receiving pixels as well as transferring and outputting information charges accumulated in the first and second pixels independently of each other. A timing control circuit sets the storage time of information charges at the first light receiving pixel and the storage time of information charges at the second light receiving pixel. The apparatus of claim 1 includes "a signal processing circuit for generating an image signal by adding a first output corresponding to the first light receiving pixel and a second output corresponding to the second light receiving pixel of said solid-state image pickup device". Therefore, claim 1 is submitted to clearly distinguish patentably over Takahashi.

Claim 7 defines a solid-state image pickup apparatus in similar fashion. In addition to lines of first and second light receiving pixels, claim 7 includes a drive circuit in the manner of claim 1. The apparatus of claim 7 also includes "the signal processing circuit for generating an image signal by adding together said first output and said second output corresponding to identical horizontal scanning lines".

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Therefore, claim 7 is submitted to clearly distinguish patentably over Takahashi, again for the reasons set forth above.

In Paragraph 1 on page 3 of the Office Action, claims 4-6 are allowed. In Paragraph 2 on page 4 of the Office Action, claims 2, 3 and 8-10 are objected to but are indicated as being allowable if rewritten in independent form. These indications have been duly noted by Applicant. Applicant has not rewritten claims 2, 3 and 8-10 in independent form inasmuch as claims 1 and 7 are submitted to be patentable for the reasons discussed above.

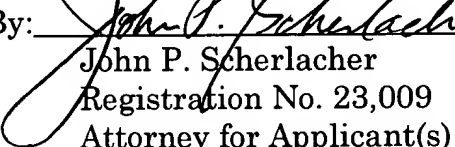
In conclusion, claims 1-3 and 7-10 are submitted to clearly distinguish patentably over the art, in addition to allowed claims 4-6, for the reasons discussed above. Therefore, reconsideration and allowance are respectfully requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6846 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: February 19, 2004

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